FLPdTool

User Guide

FL7001 Cable Programmer

Revision 0.8

July 10, 2026

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Revision History

Revision	Date	Comment
0.1	23 July 2015	Initial release
0.2	23 July 2015	Content and grammar cleanup
0.3	24 July 2015	Supplement lost parts.
0.4	24 July 2015	Add key-value validation.
0.5	7 Sep 2015	Add auto program mode.
0.6	25 Sep 2015	Update new GUI layout.
0.7	12 Oct. 2015	Update new GUI layout.
0.8	15 Oct. 2015	Update new GUI layout.

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1. General Overview

The FL7001 chip is a USB 3.1 Type-C e-marker cable solution. This in-cable chip provides information about the power handling capabilities and manufacturer of the cable using the USB Power Delivery 2.0 specification.

FL7001 provides cable makers a quicker way to manufacture Type-C cable with specific information inside of it. For example, by providing information about high current 3A or 5A support, USB power delivery provider can read this information from cable and provide the correct and safe power level through this cable to prevent burn out of your device.

Fresco logic brilliantly introduce a scalable, easier use/maintain and fast programming solution for cable maker to mass produce FL7001 in-cable chip with our FL7001 cable programmer.

FLPdTool can also be used to program up to 16 cables at the same time, controllable through the single GUI interface.

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2. System Requirement

Software requirements:

1. Operating Systems – **Microsoft® Windows® 7/8/8.1/10**

Hardware requirements:

1. Available USB Port(s)

3. Package Components

Component	Explanation
Application\x64\FLPdTool.exe	Application for x64 Windows systems.
Application\x86\FLPdTool.exe	Application for x86 Windows systems.
Driver\FLGenericDevice-x.x.x.x.exe	Driver for FL7001 programmer.
Firmware\x.x.x.x.bin	Firmware for FL7001 programmer.

4. Warning

FL7001 chip inside cable that can only be programmed once.
After it has been programmed, configuration values **CAN NOT BE CHANGED**

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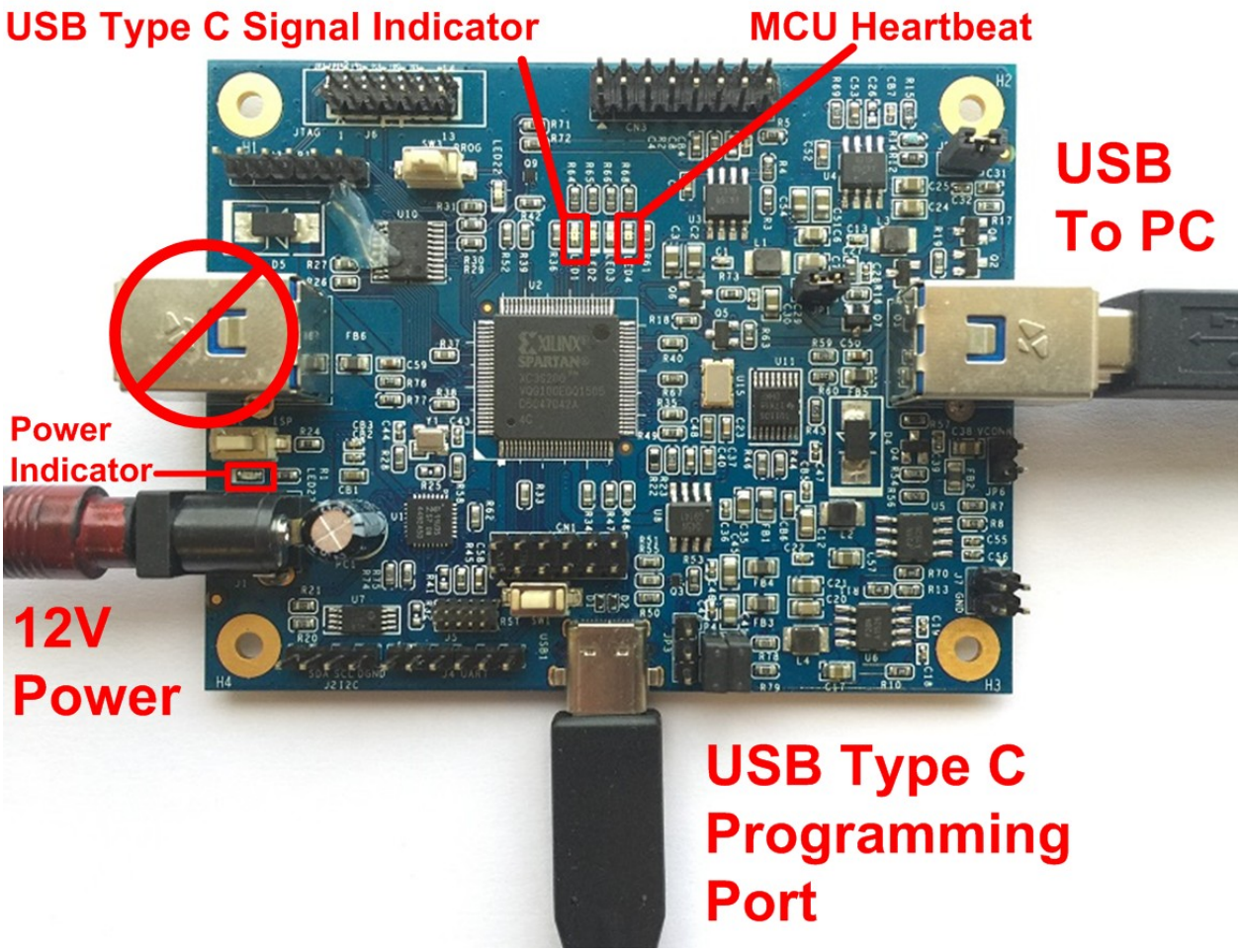
5. Board Overview



USB Type-C Signal Detection Indicator (LED1)

Indicates e-marker chip is detected. If it doesn't light when a cable is connected try flipping the cable connector over and reconnecting. If the light stays off then there is a PD communication failure to the e-marker.

MCU Heart Beat (LED4)

This should blink dimly to indicate the programmer is running. If it is not blinking the programmer may be damaged.

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12V Power Adapter

Requires 12V DC and at least 500 mA. Connector has positive center and ground on the outside.

6. Driver update

1. Connect your FL7001 cable programmer to USB port.
2. Double click driver install package under \Driver folder, and install driver, then reboot your system.

Fresco Logic USB Generic Driver Setup
Welcome to the Fresco Logic USB Generic Driver 2.0.8.0 Setup Wizard
The Setup Wizard will allow you to change the way Fresco Logic USB Generic Driver features are installed on your computer or even to remove Fresco Logic USB Generic Driver from your computer. Click "Next" to continue or "Cancel" to exit the Setup Wizard.
< Back
Next >
Cancel

After install procedure, you can check current installed driver version in our FLPdTool GUI:

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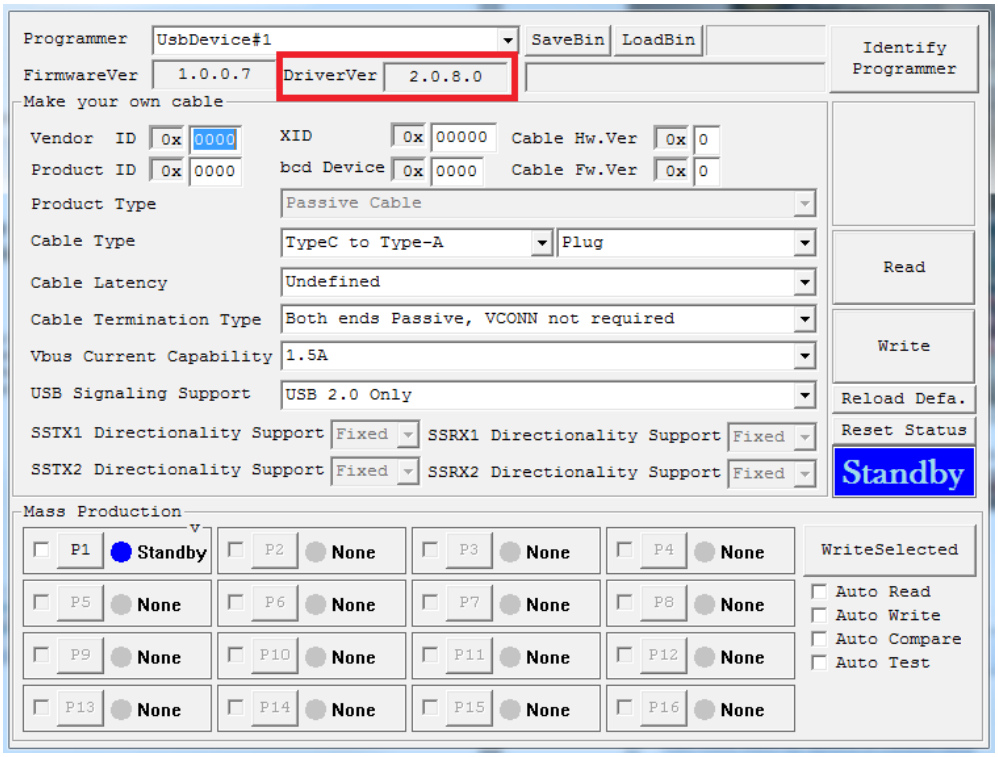
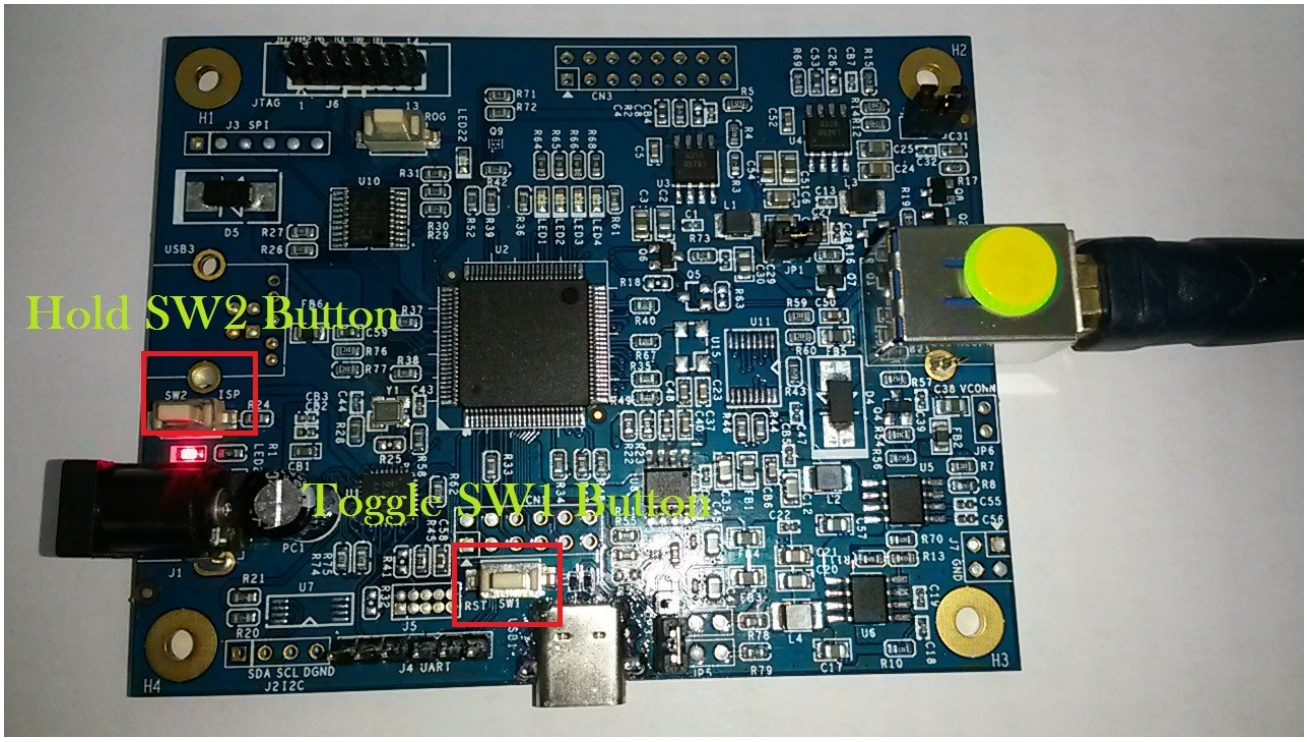


7. Firmware update

1. Connect your programmer to PC through USB cable.
2. Please hold SW2 button, and toggle SW1 button on FL7001 programmer board.



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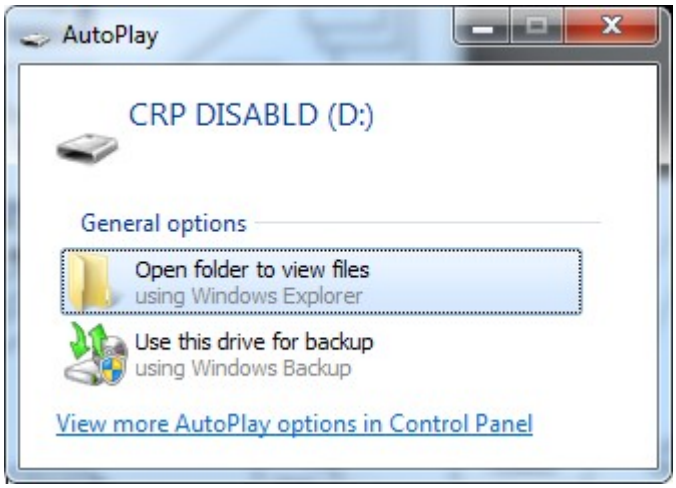
3. Then you will see a mass storage folder shows up:



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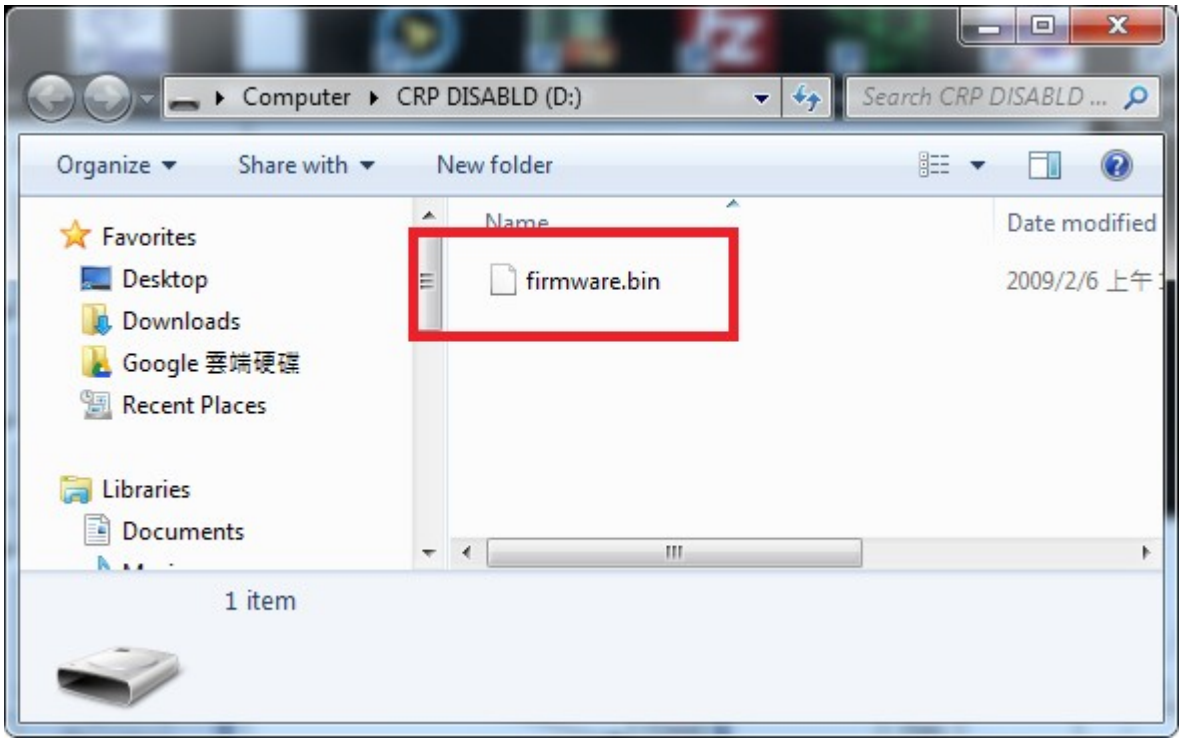
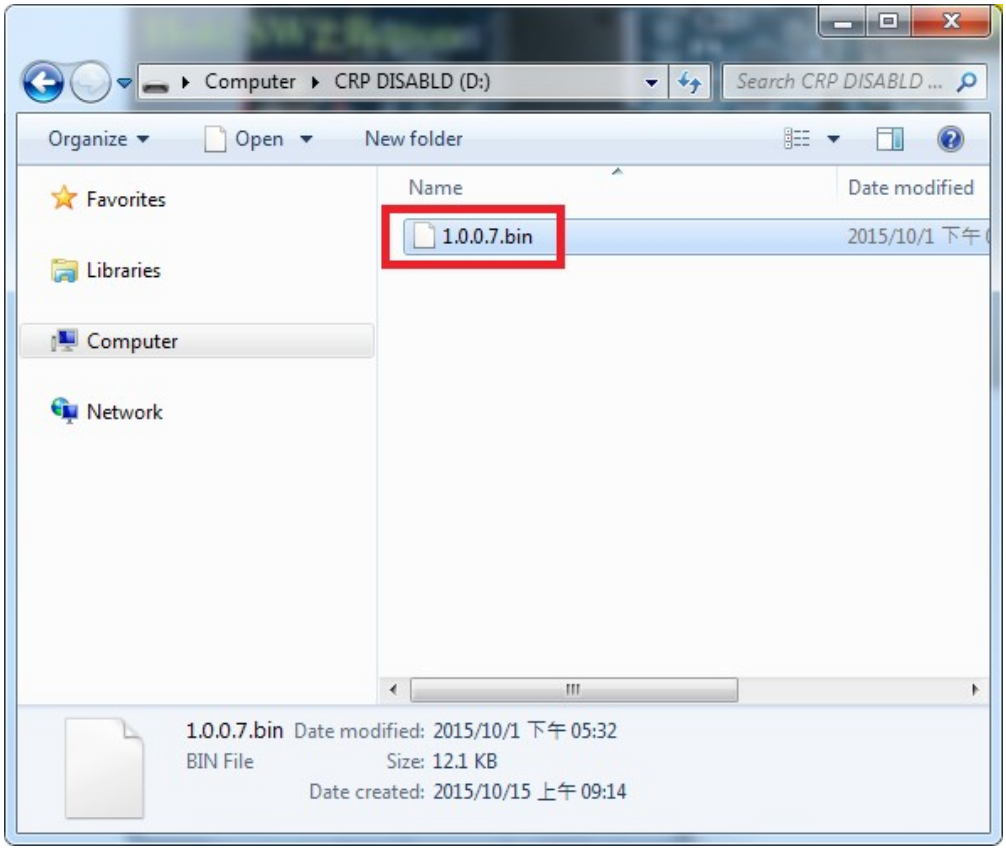
4. Get into this folder; you will see the following file inside of it:



5. Please remove this firmware.bin first, then copy the new firmware file to it, we don't need to rename it to firmware.bin, just copy it to the firmware update folder like the following:



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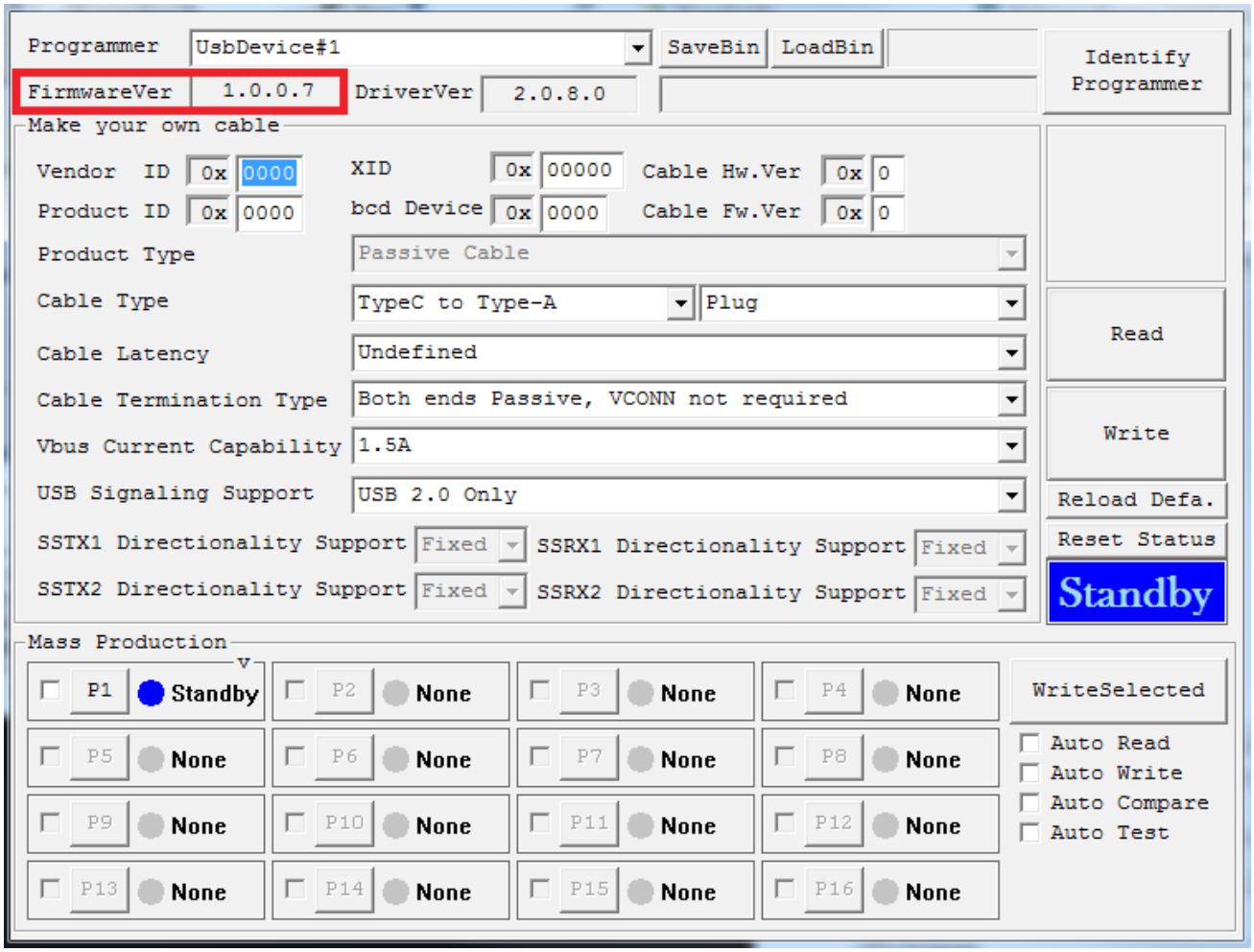
6. Toggle SW1 to reset dongle, then you will found the mass storage folder disappears.

Note: Programmer will auto rename it to internal filename “firmware.bin” and file date will always be 2009/2/6, So don’t panic about the firmware not loaded when you see the filename and date when you toggle the firmware update folder again.

If you want to know the exactly firmware version, please check our GUI as following:



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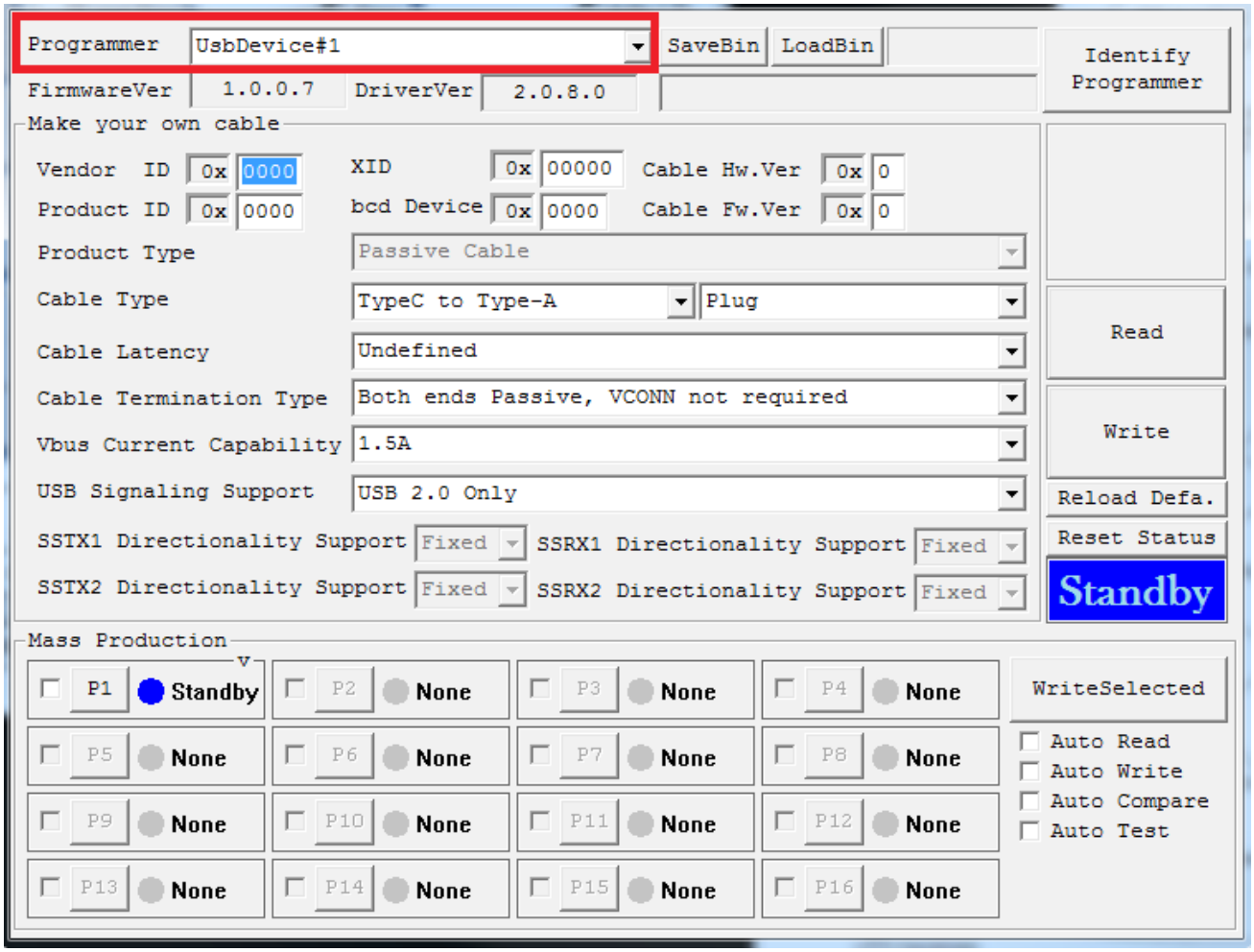
8. GUI Functions

There are night major parts in GUI as following:

#1: Type-C Cable Programmer list box.



When more than one programmer is connected, selects the programmer for Read/Write operations.

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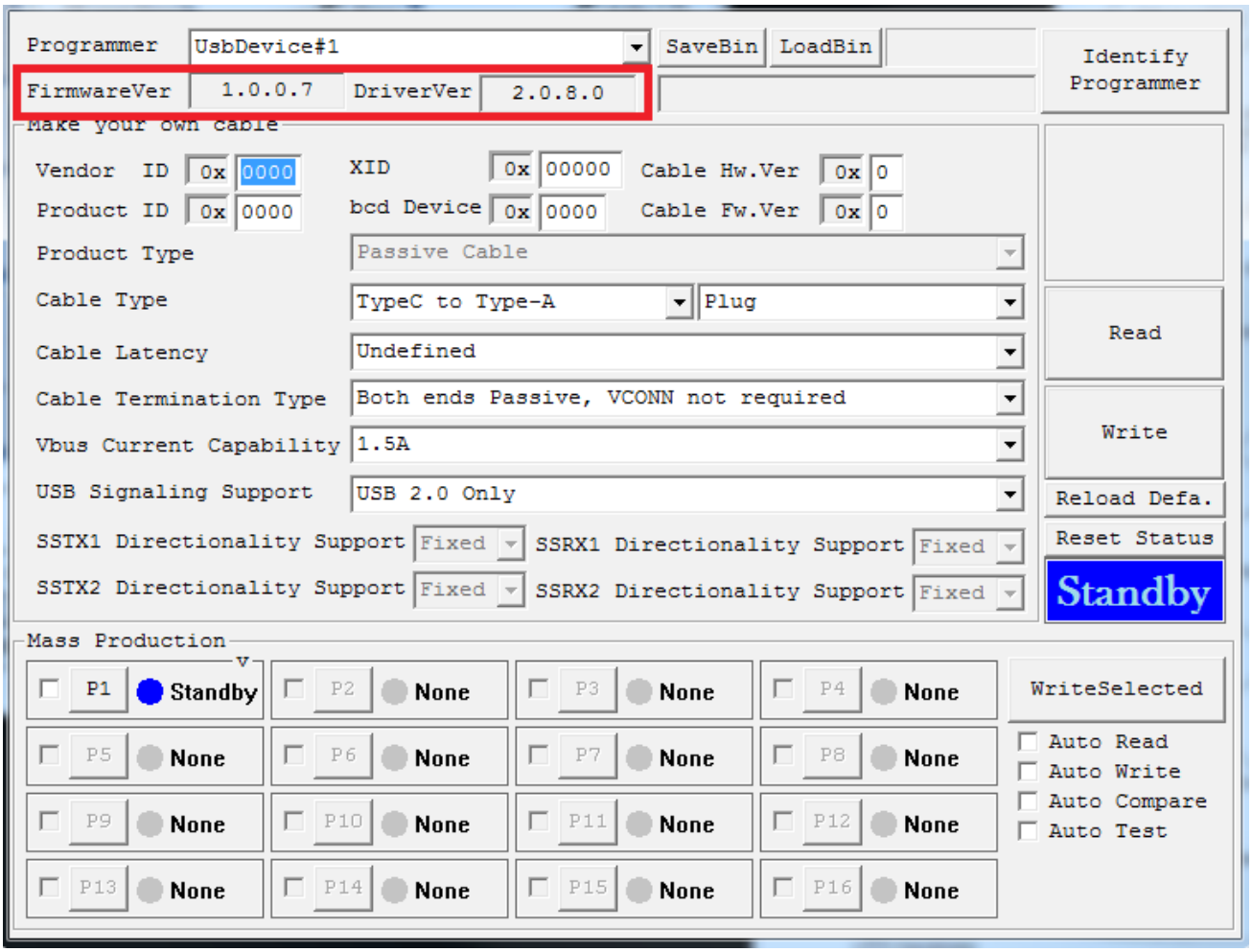
#2: Firmware and Driver version display.



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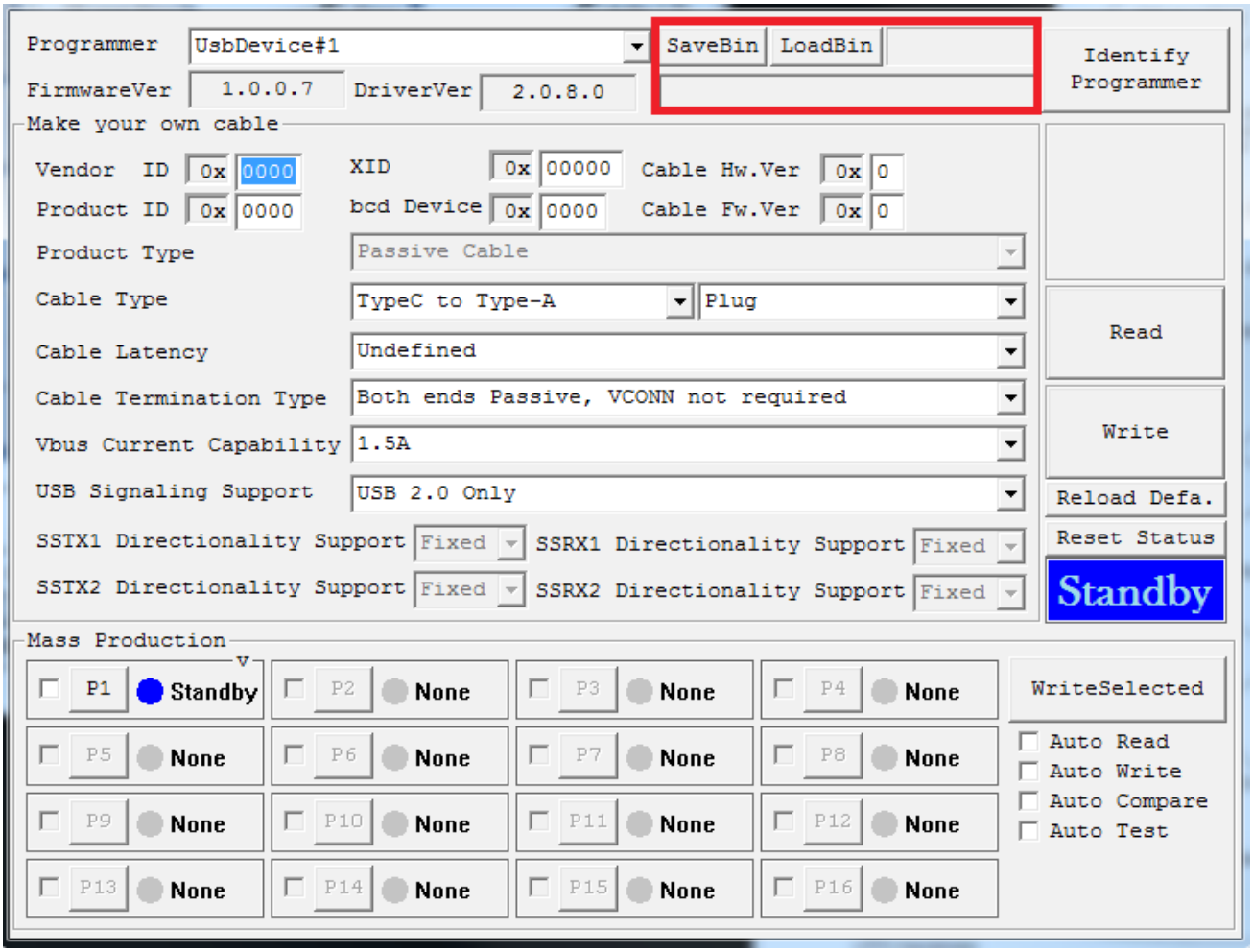
#3: Save/Load current cable setting to binary file.



This is used to load or save configuration settings to binary file. The default save file name is efuse.bin, and it will reside in the same folder as the FLPdTool.exe program.

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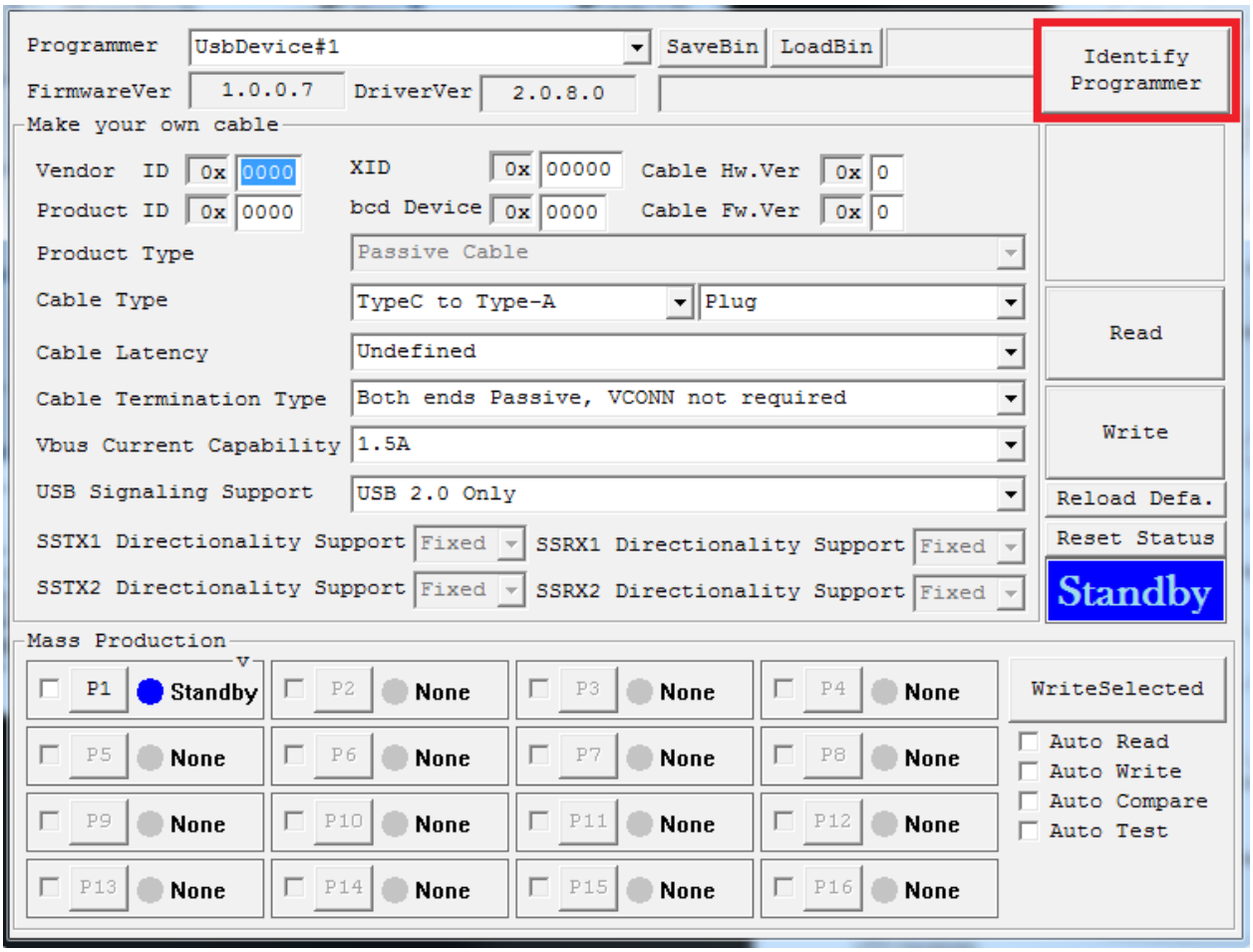
#4: Identify current programmer.



If you plug-in multiple programmer in one system, you may want to find out current programmer that you are using. Just press this button and you will see the programmer get blinking if it is the current working one.

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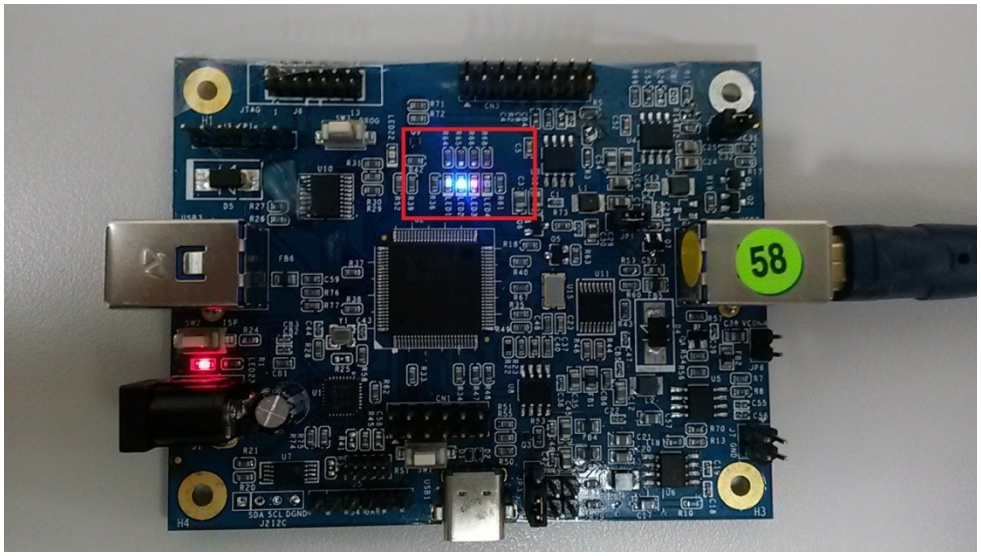
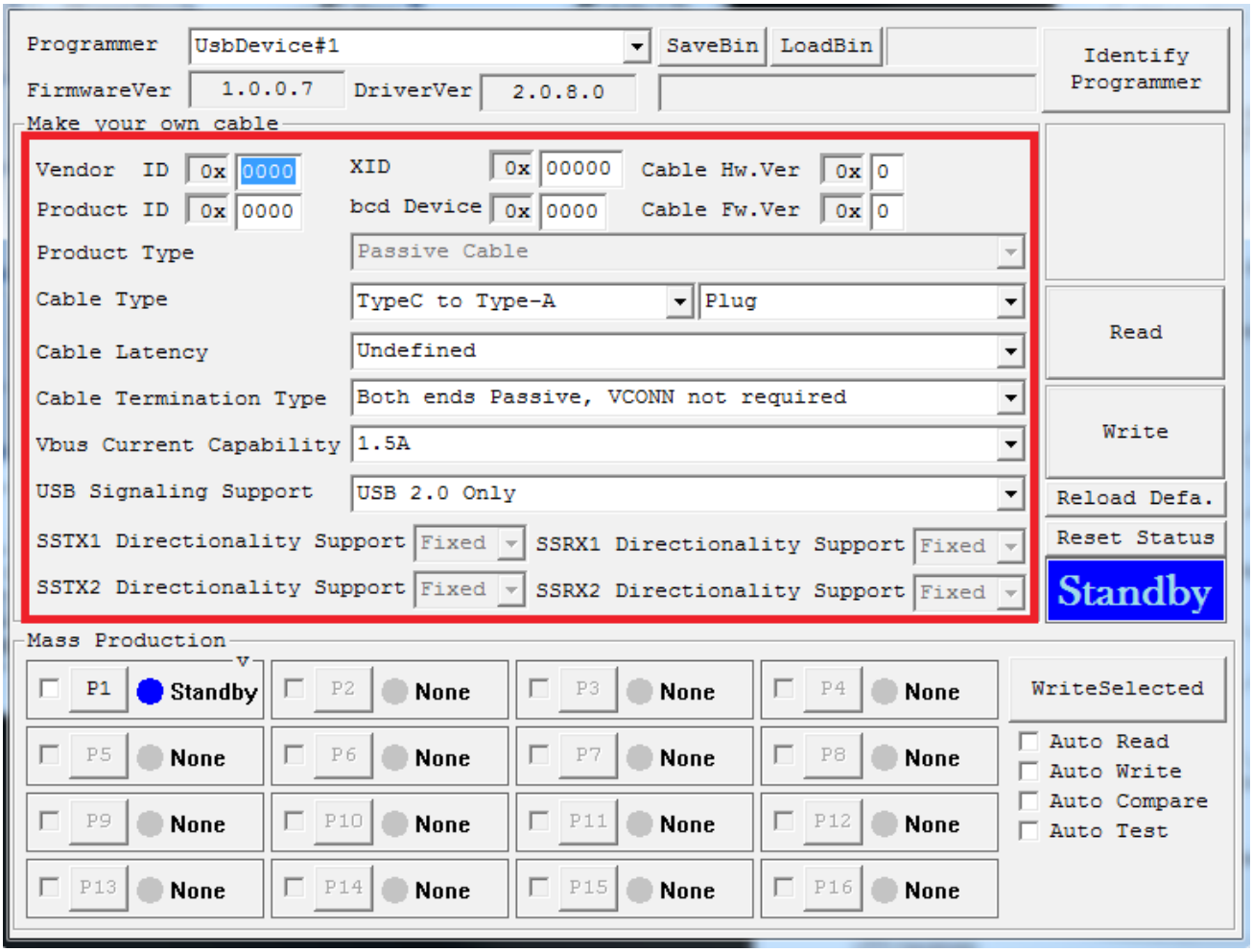


#5: Make your own cable.



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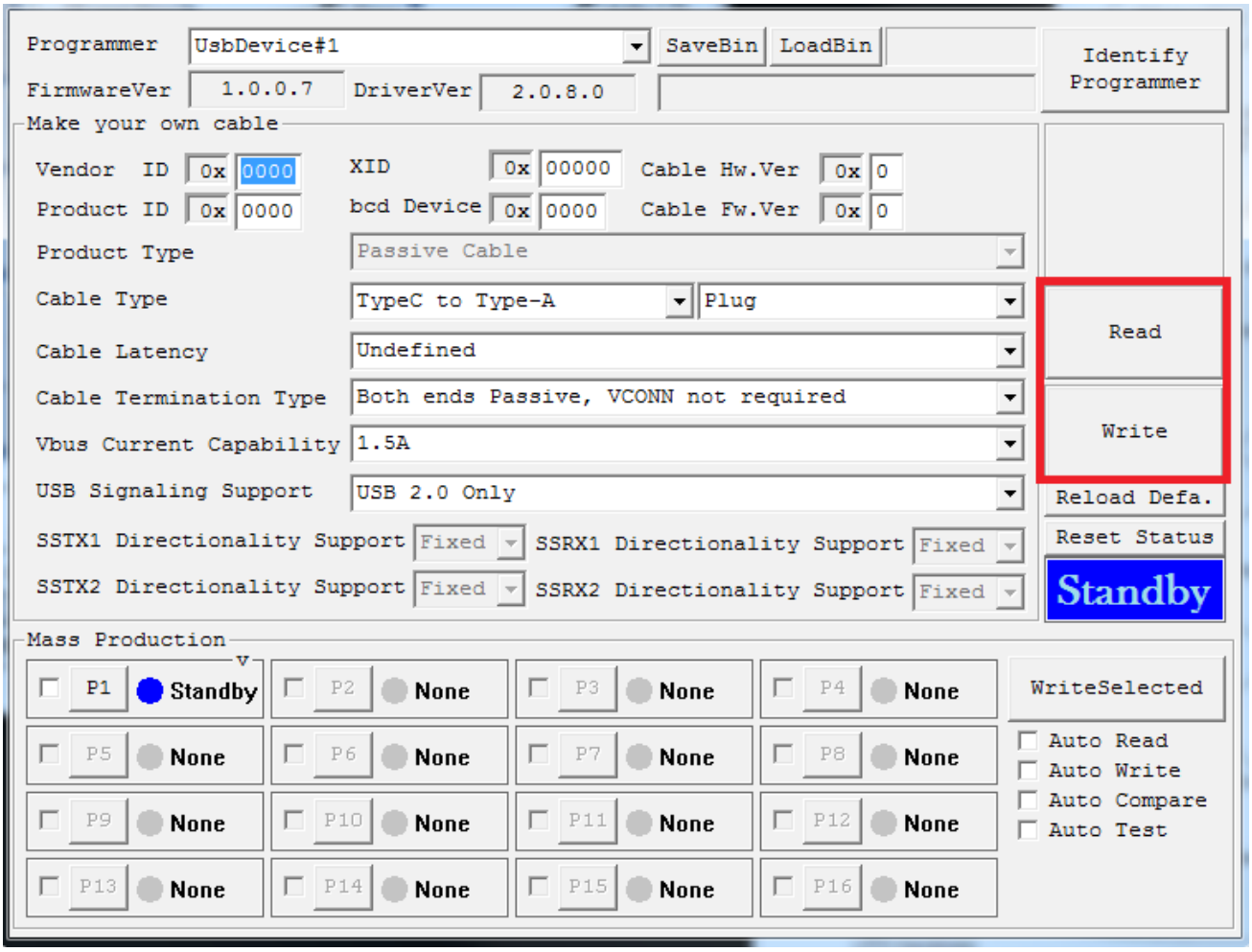
You can customize the cable information in this area, please make sure you know about the power feature of this cable and real physical power tolerance of the cable you want to make.

#6: Read/Write function for specific programmer.



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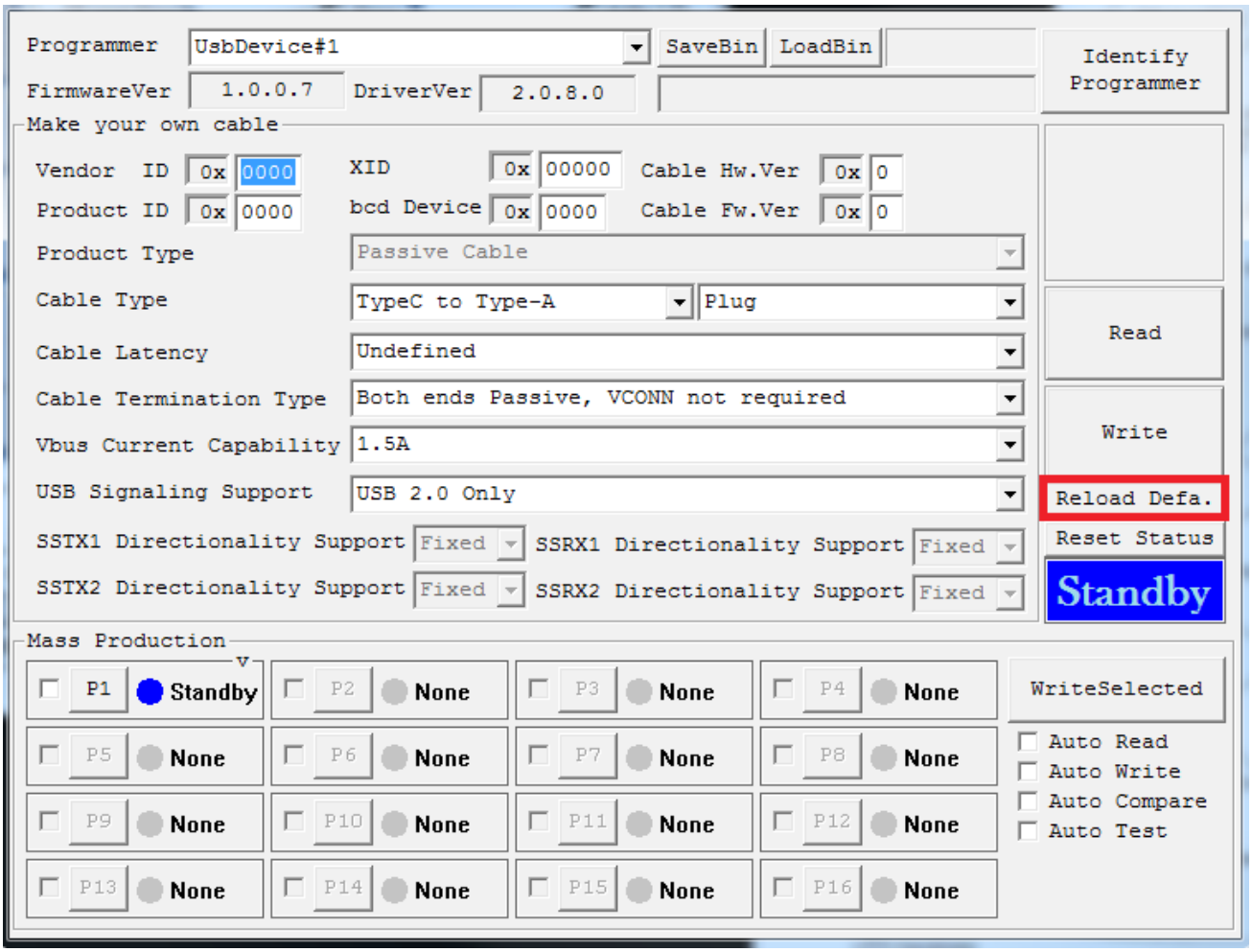
#7: Reload default setting.



You can use this button to reset your GUI setting to default.

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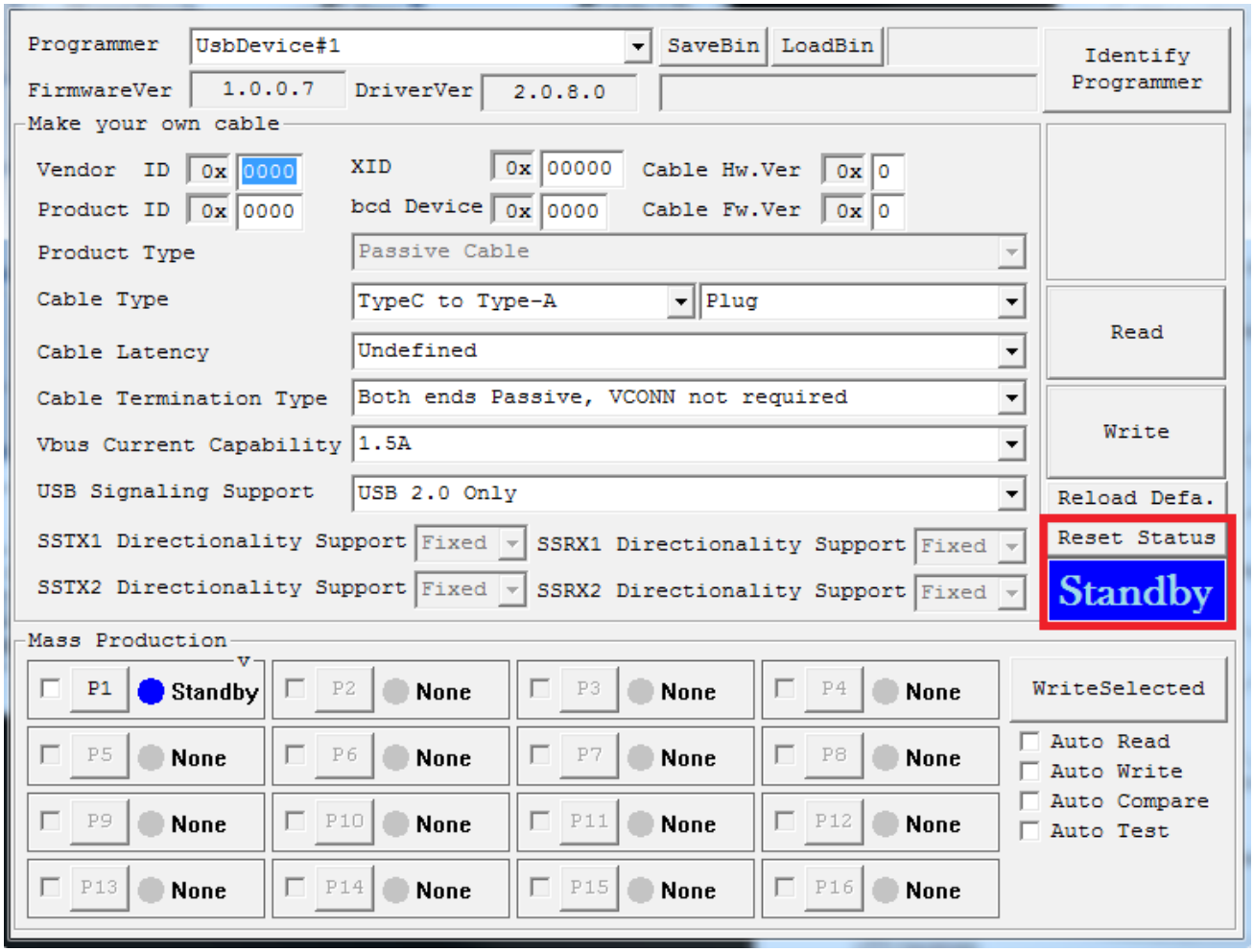
#8: Programmer status control



The display area shows current programmer status, and you can use Reset Status button to reset current test result.

The following is the definition of each status:

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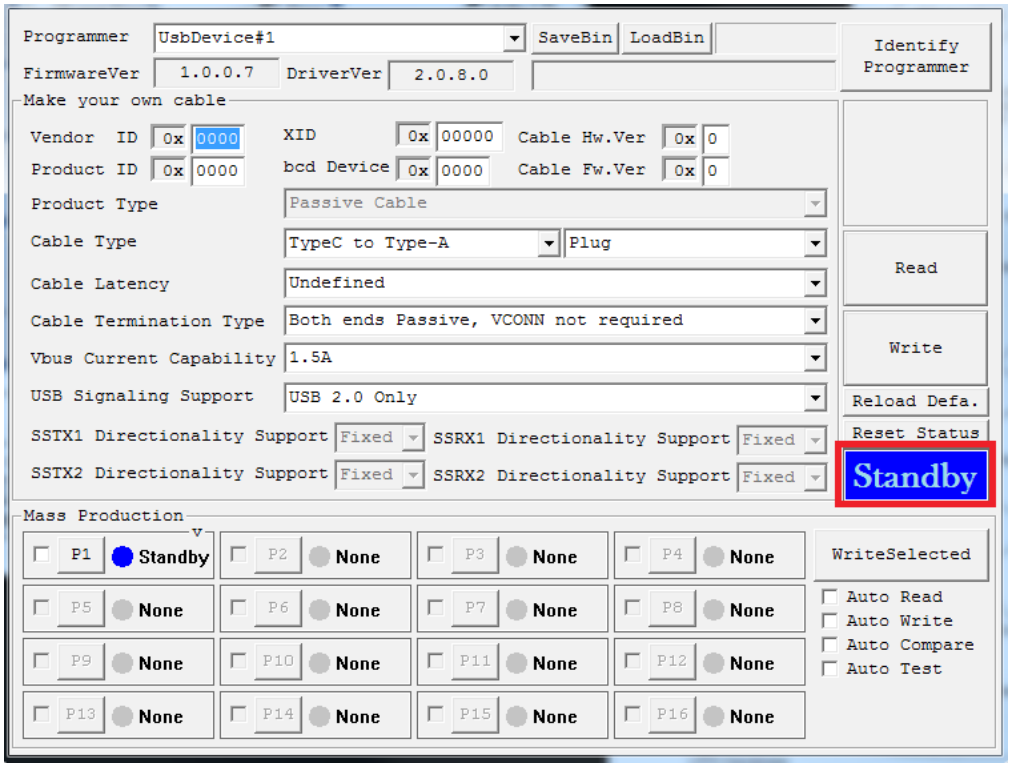
- **Status : Standby**

It means detect programmer but without type-c cable.



- **Status : Ready**

It means detect programmer with cable plugged. LED1 should be also lighted at this point.

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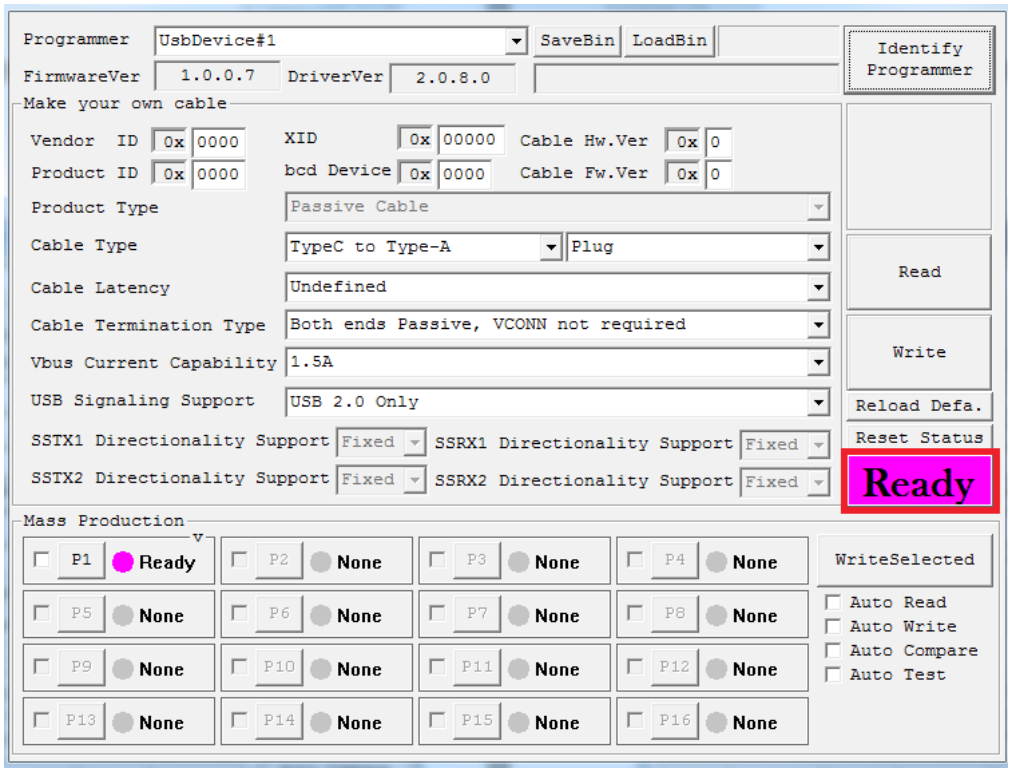
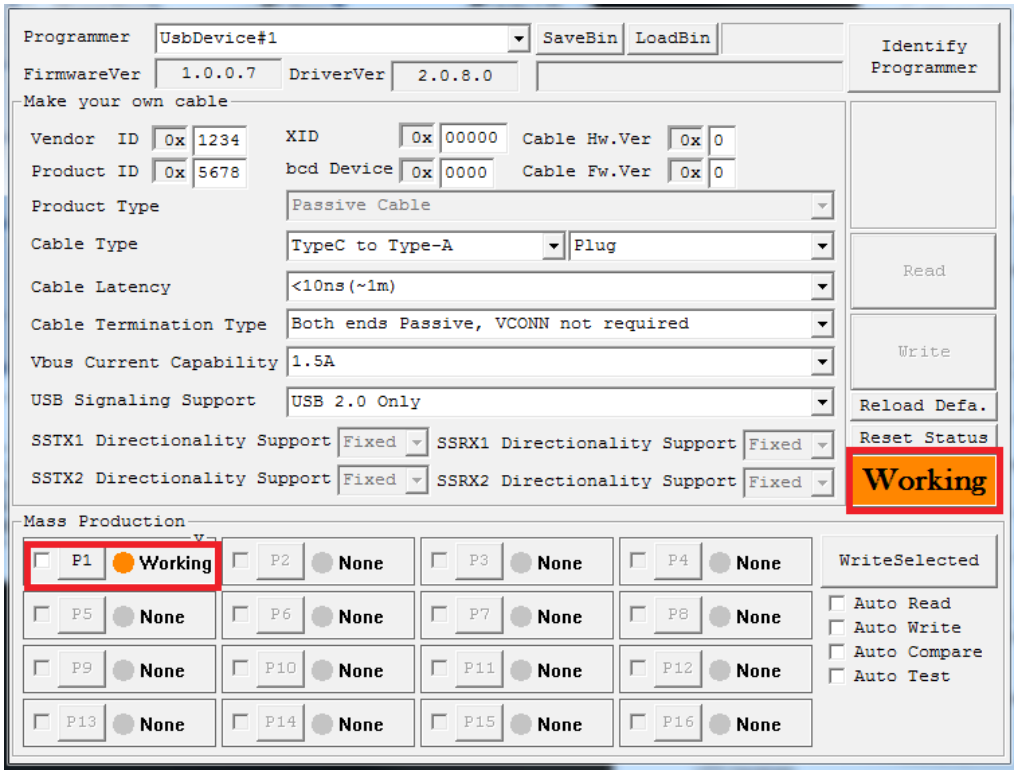


- **Status : Working**

Test is in process.



- **Status : Pass**

Test result is passing.

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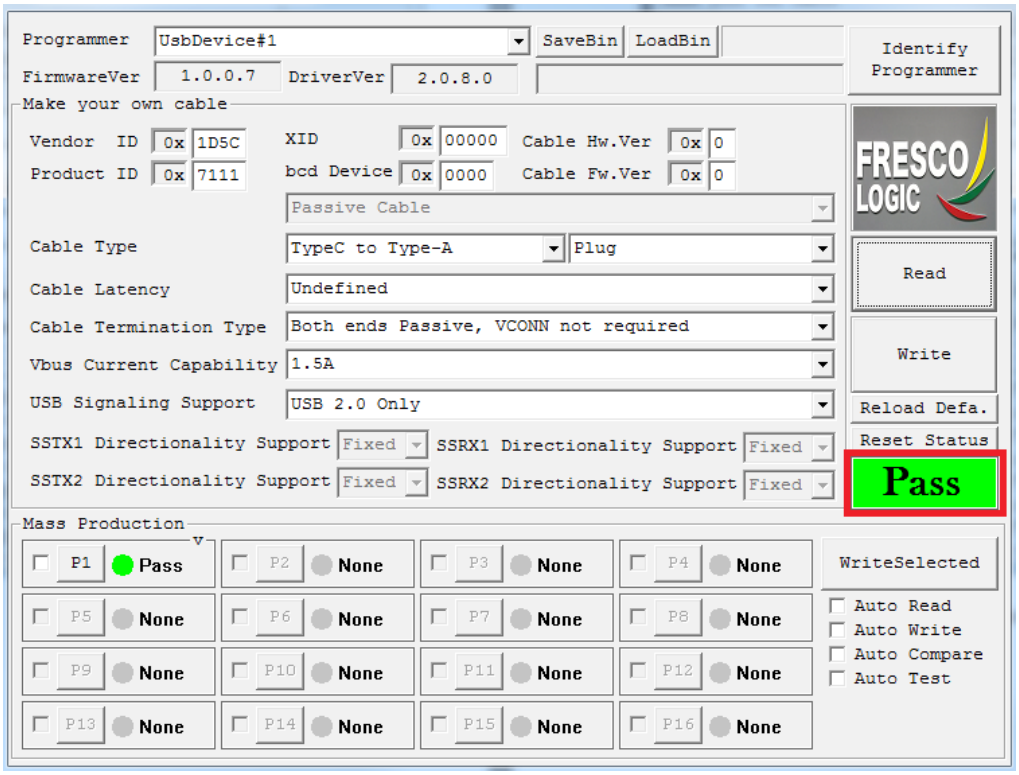
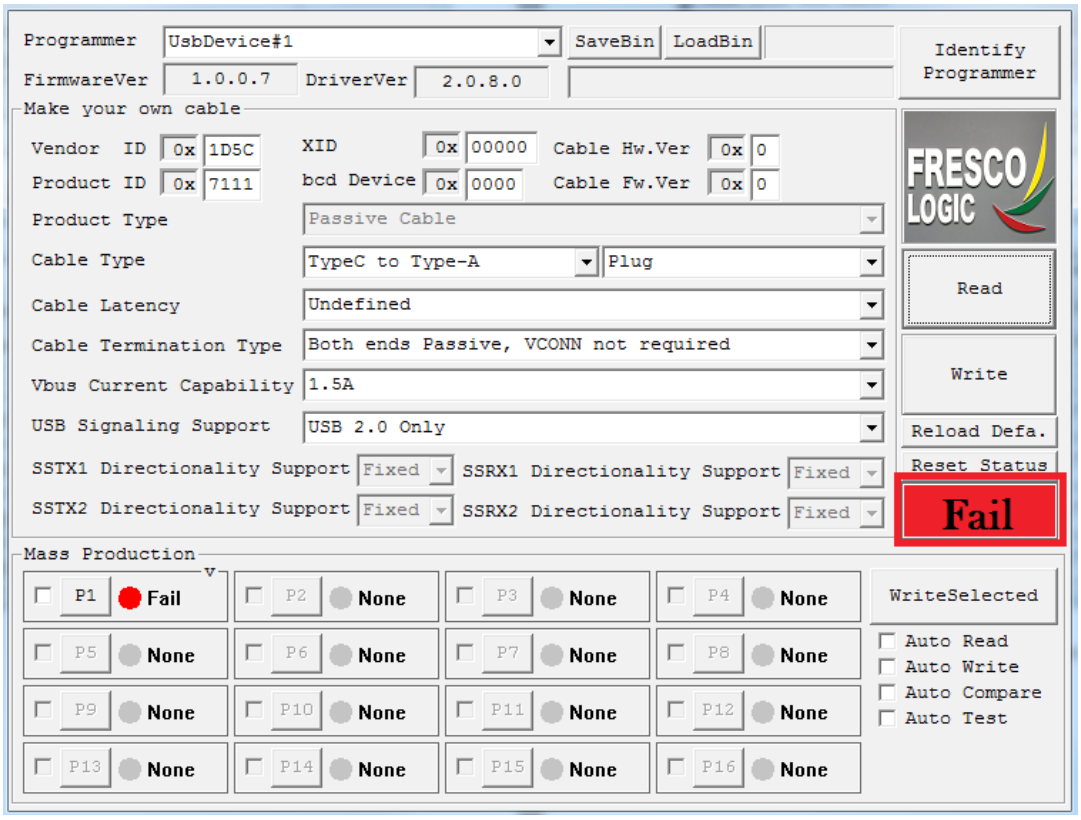


- **Status : Fail**

Test result is fail.



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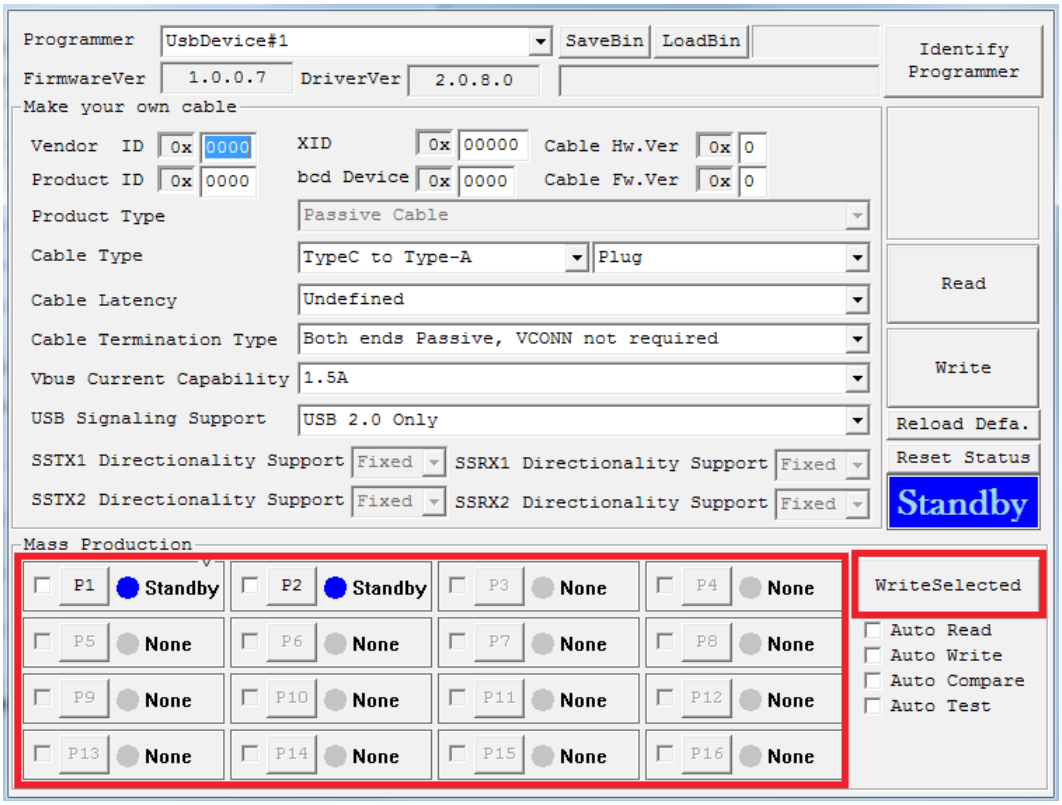
#9: Mass production control panel.



If you plug-in multiple dongles, for example, 2 dongles, you will see the following

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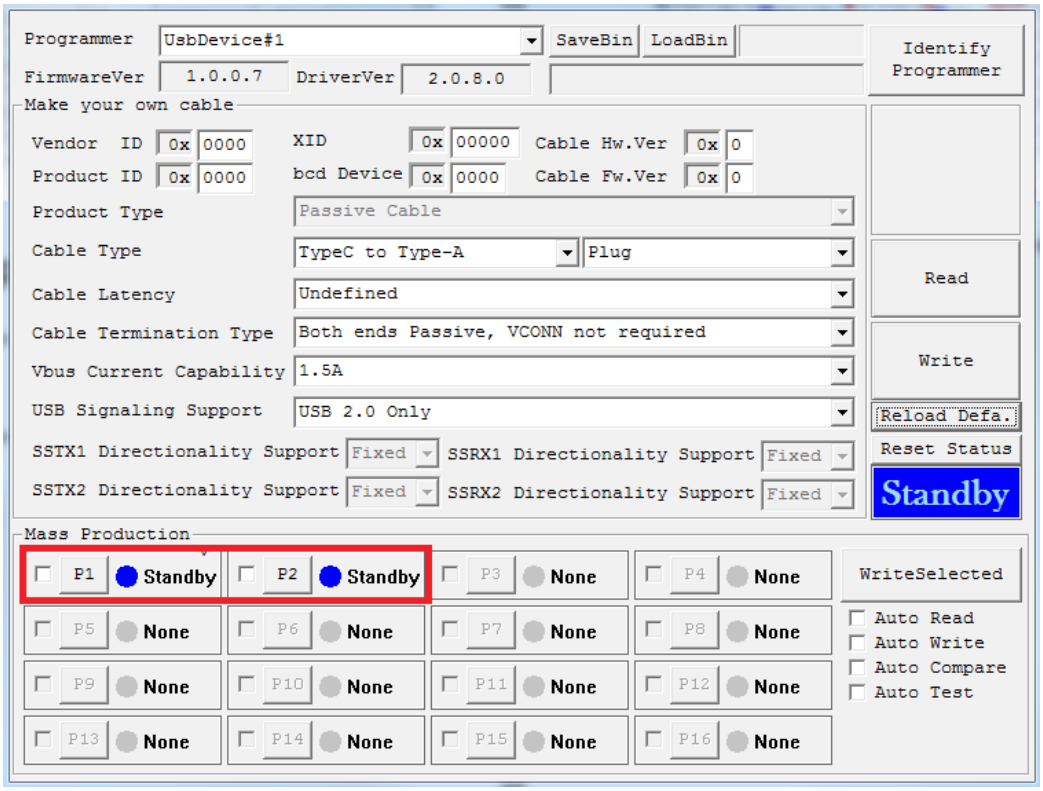
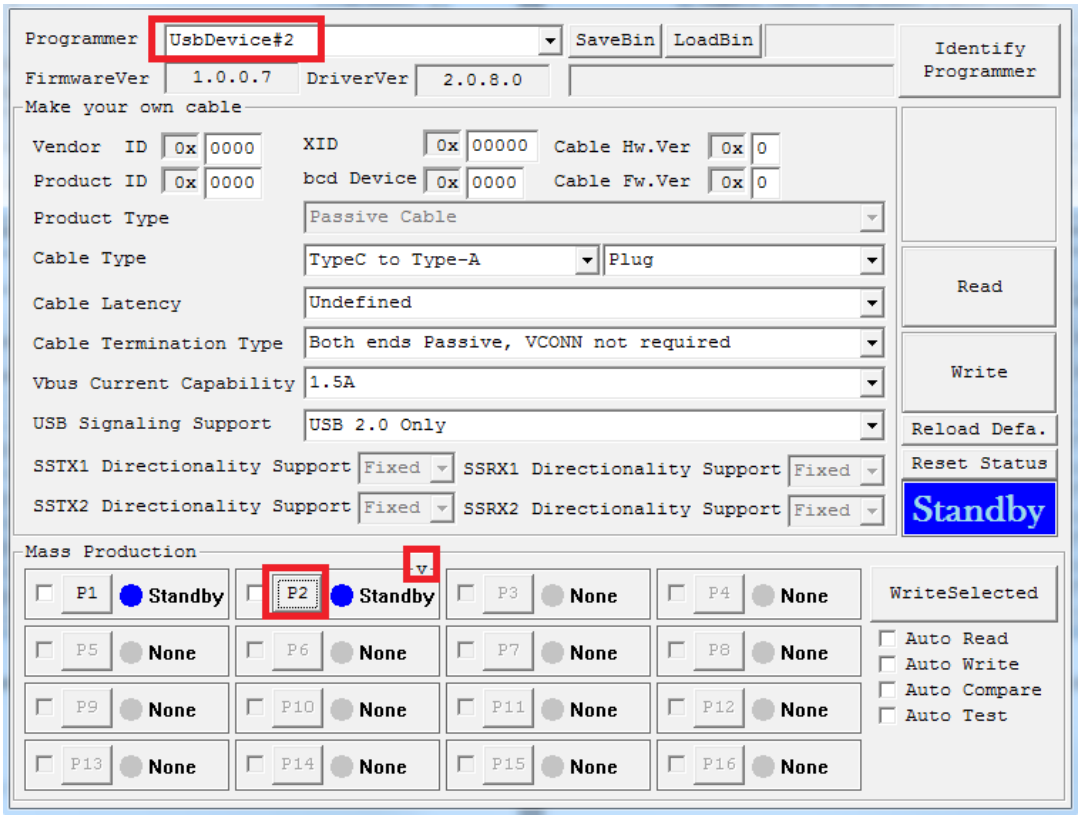


Also, you can use the Px Button to select current programmer, and there will be a check on it.



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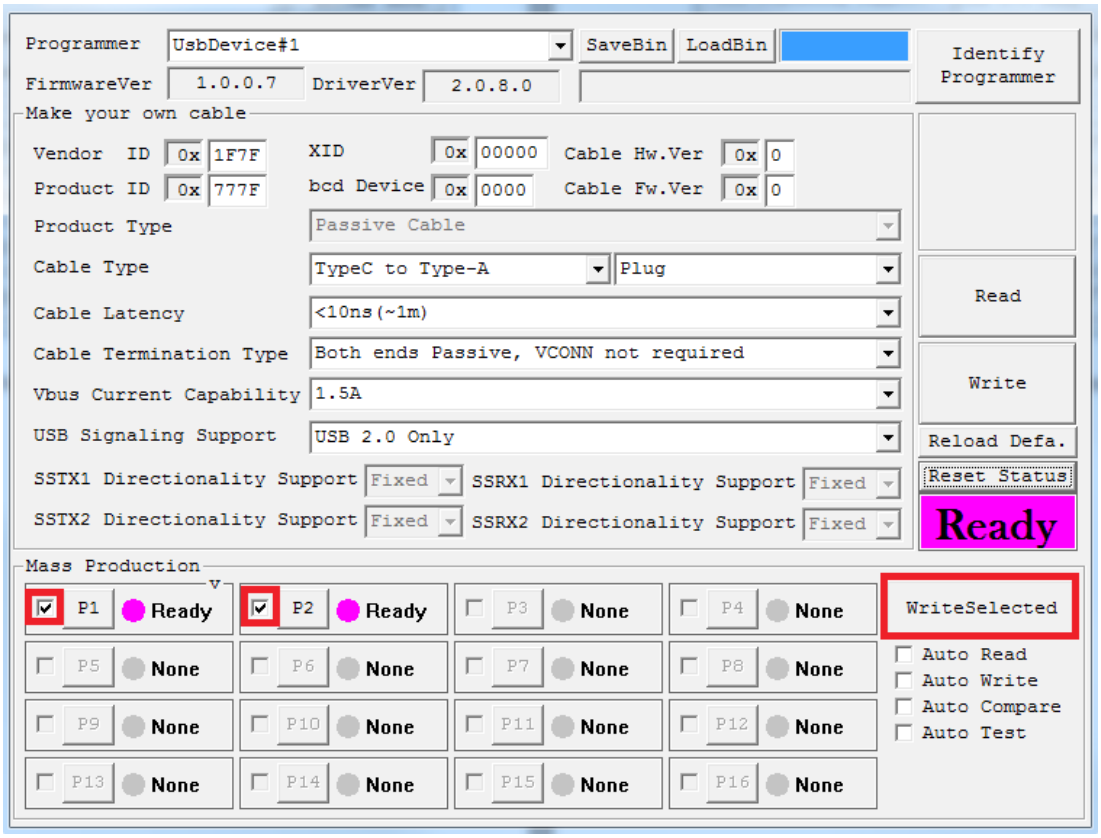
If we want to program multiple dongle at the same time, click the corresponding checkboxes to select:



If you get a different test result between the cables, the GUI will indicate which dongle passed and which one failed.

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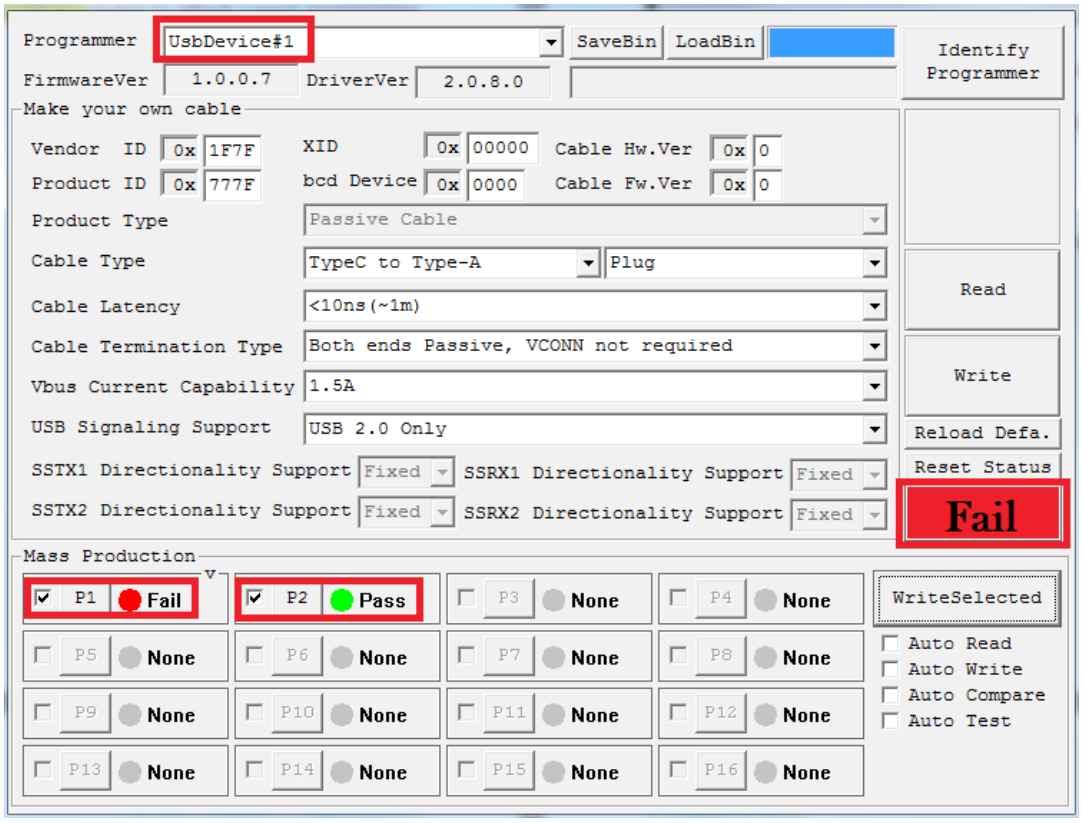
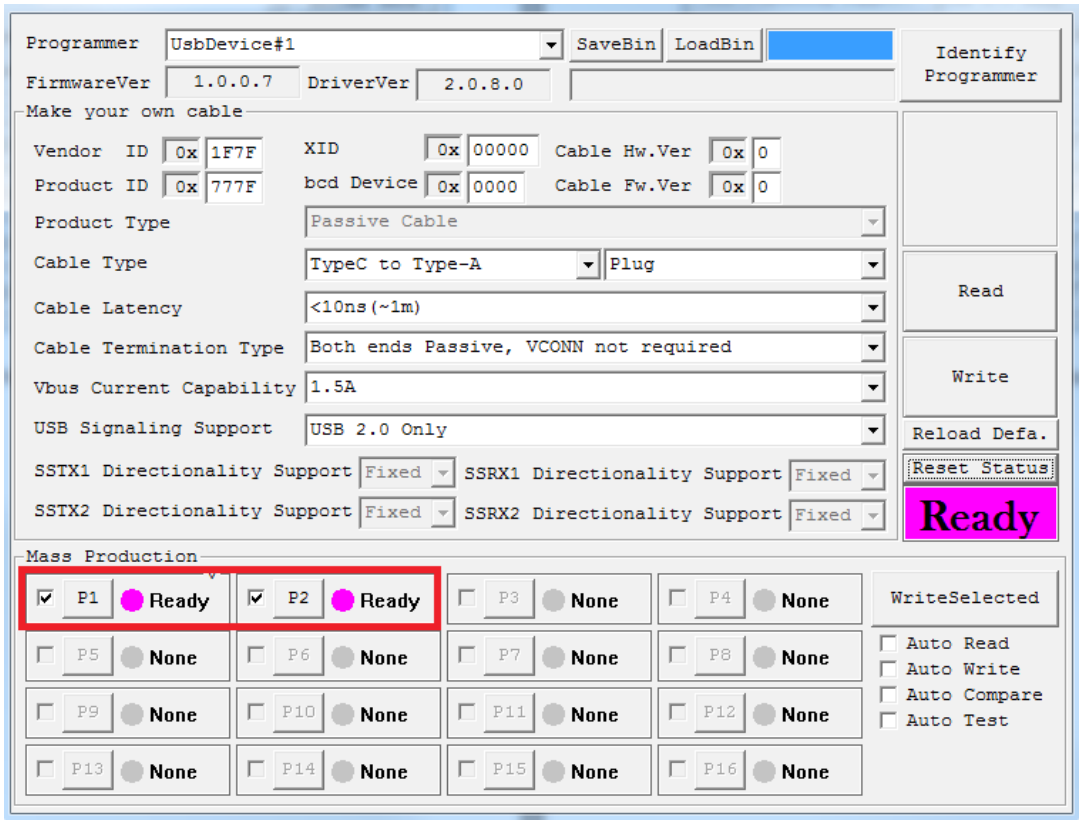


After testing, you can use ResetStatus button to refresh current programming status.



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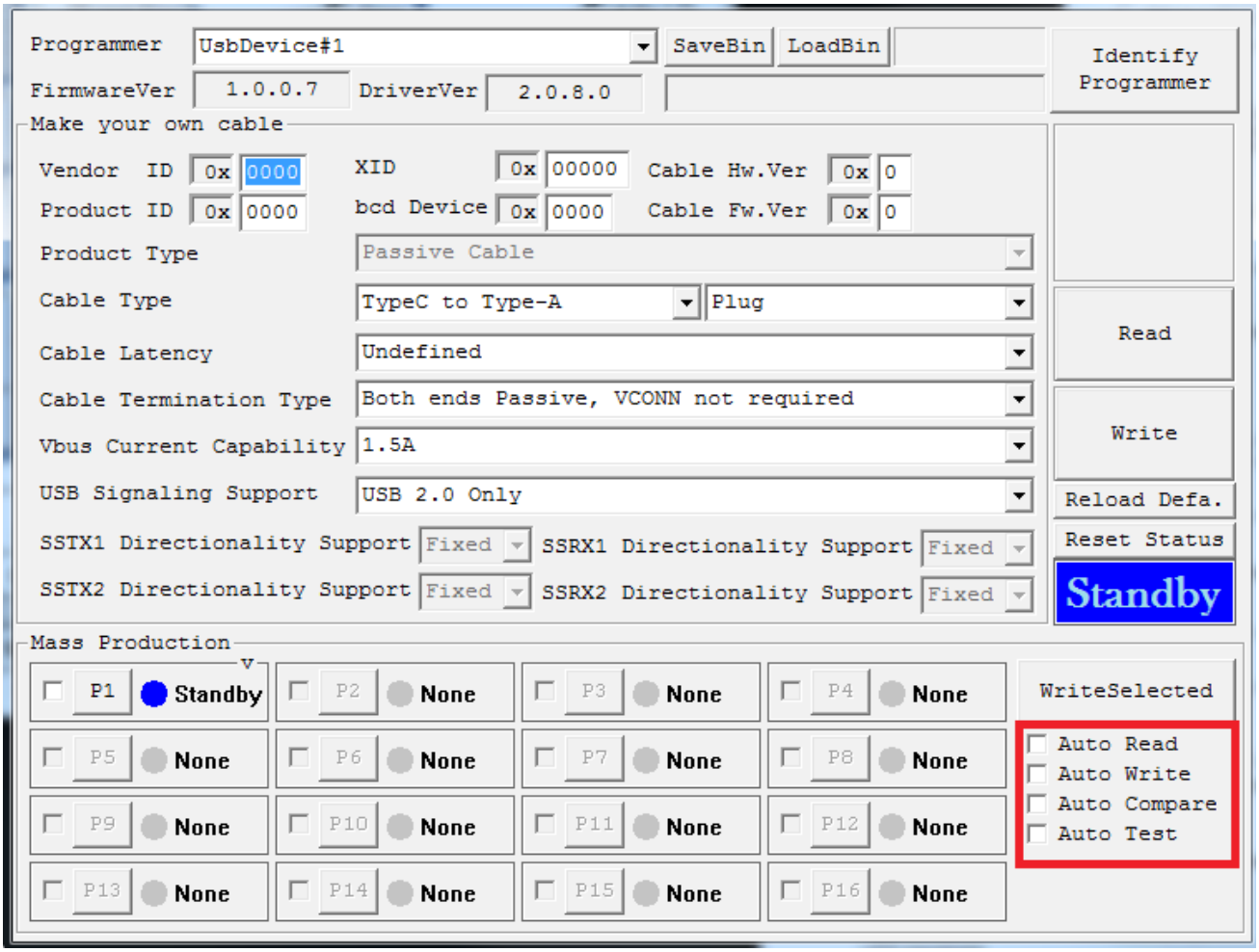
9. Auto Mode



This is automatic cable read, write, compare and test mode.

When an e-marker is detected, it will automatically start the function selected.

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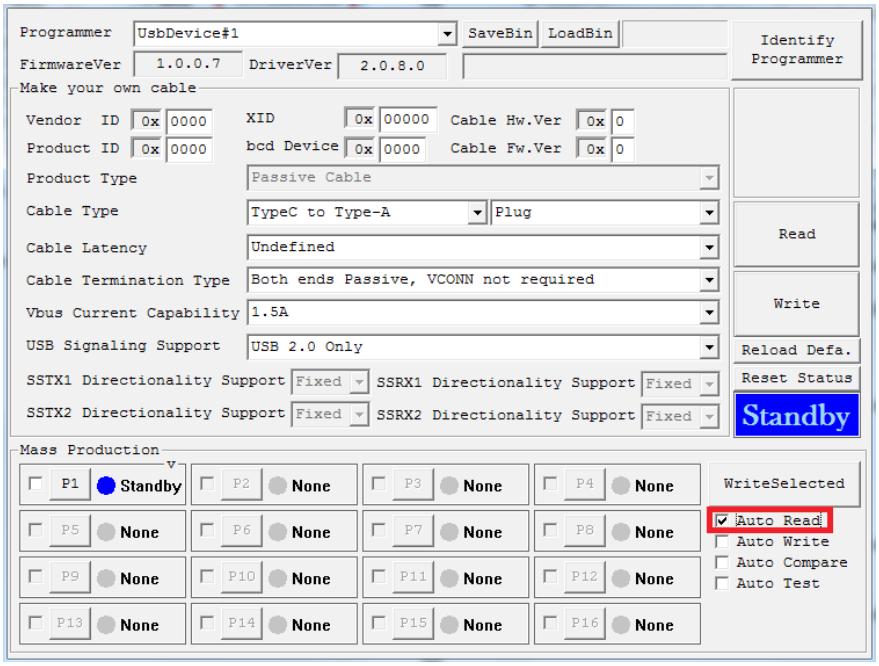
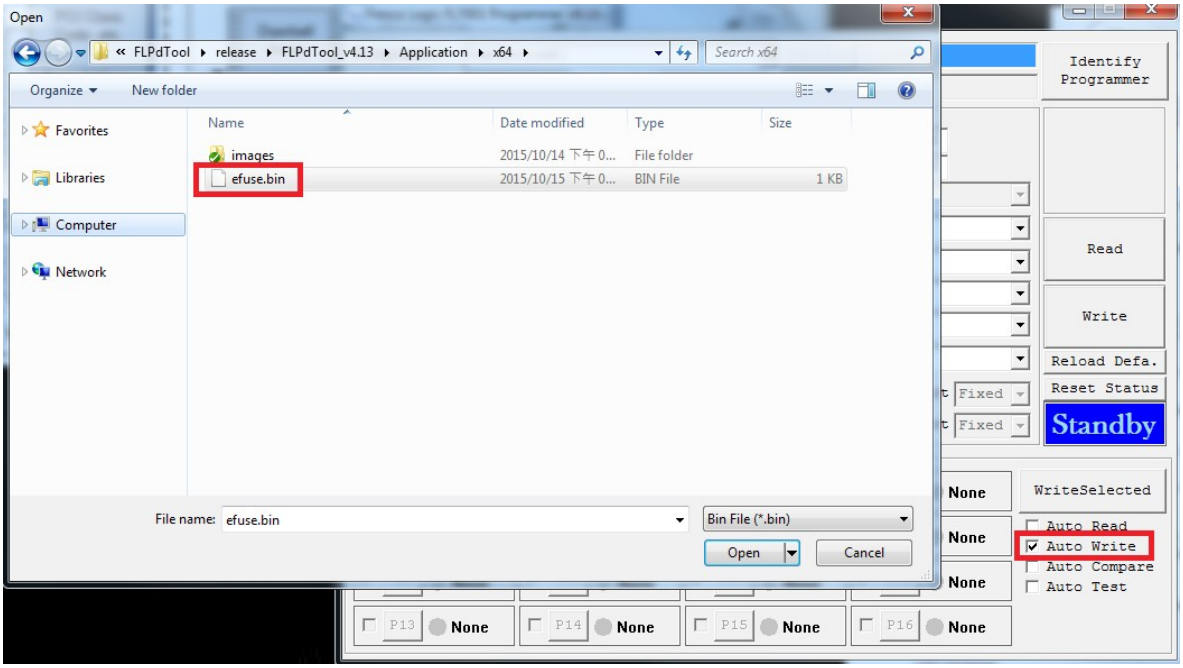
1. Auto Read

When turn on this mode, after you plug in Type C cable to programmer, it will automatically read its data.



2. Auto Write

When this mode is turned on, it will ask you to load a binary file that has been generated previously. You can produce this binary file by SaveBin button in our GUI.



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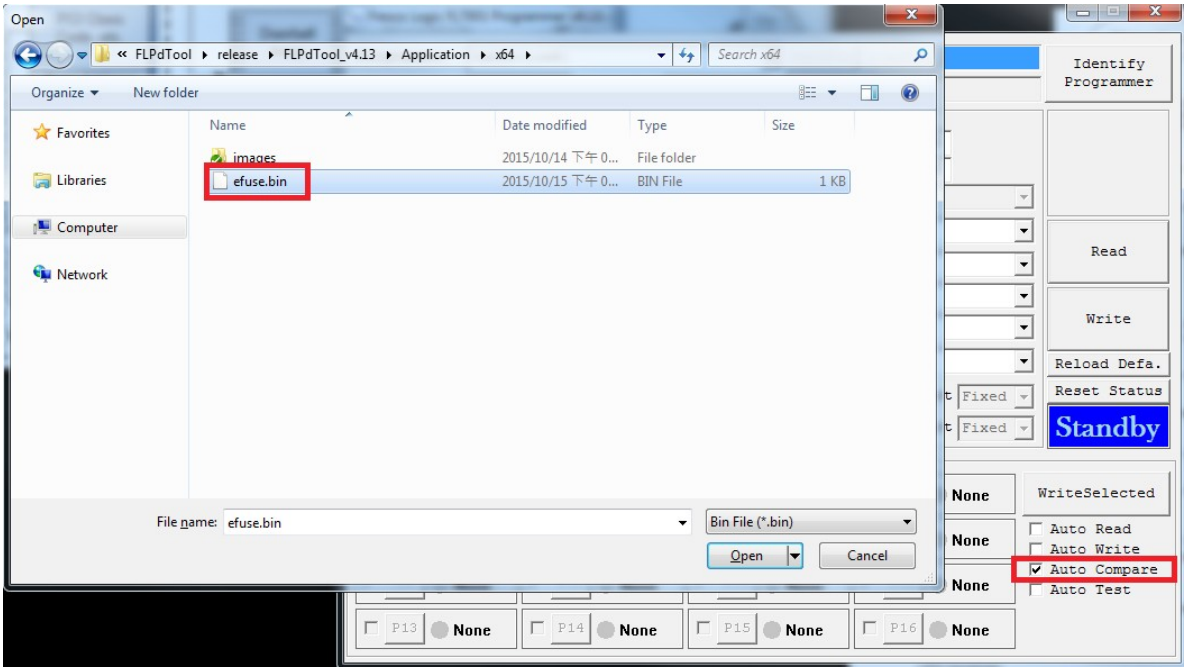
When an e-marker is detected, it will automatically write the binary data to it.

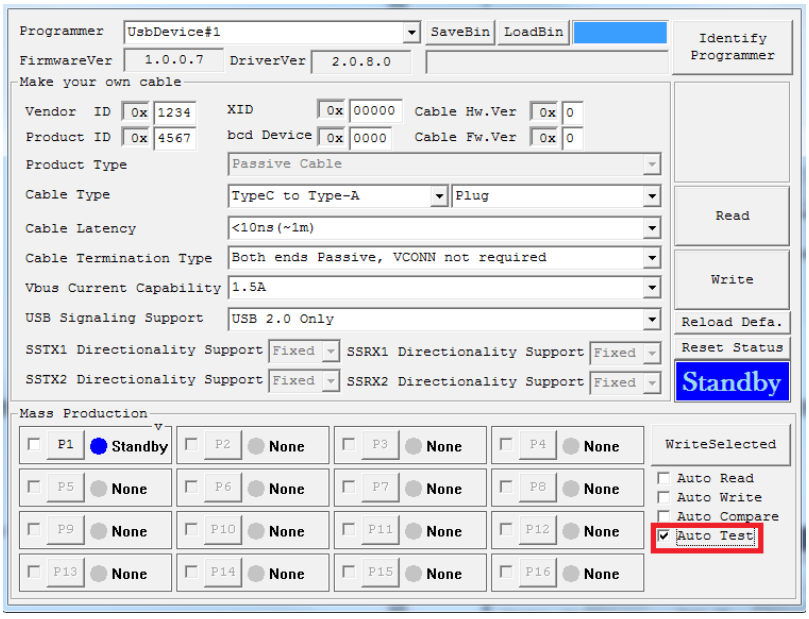
3. Auto Compare



When this mode is turned on, it will ask you to load a binary file that has been generated previously. You can produce this binary file by SaveBin button in our GUI.

When an e-marker is detected, it will automatically read back the data in this cable and compare to the binary data that you just specified.

4. Auto Test



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When an e-marker is detected, it will automatically try to initiate BIST mode to the e-marker a few times.

10. Application Configuration file

When FLPdTool is run for the first time, the FLPdTool.ini file will be created in the same folder as FLPdTool.exe. The default configuration settings can be customized using this file. The file contains a brief description of the options available.

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